AMENDMENTS TO THE CLAIMS

Please amend the claims as presented below.

1. (currently amended) A wheelchair comprising:

one or more devices ~~for~~ sensing an angle of a surface on which the wheelchair is supported relative to vertical;

a controller receiving input from the one or more devices, wherein the input corresponds to ~~an~~ the angle of ~~a~~ the surface on which the wheelchair is supported; and

at least one of either a control algorithm or a look up table used by the controller to control drive parameters of the wheelchair according to the input from the one or more devices to prevent an unstable condition from occurring.

2. (original) The wheelchair of claim 1, wherein the one or more devices are absolute angle sensors.

3. (currently amended) The wheelchair of claim 1, wherein the one or more devices ~~are on-board~~ includes at least two inclinometers mounted in perpendicular longitudinal and lateral planes that are oriented vertically when the wheelchair is resting on a level surface to measure an angle of pitch of the wheelchair and an angle of roll of the wheelchair.

4. (original) The wheelchair of claim 1, wherein the algorithm is a mathematical control algorithm.

5. (currently amended) The wheelchair of claim 1, wherein the drive parameters controlled by the controller include one or more of wheelchair acceleration, wheelchair deceleration, turning acceleration or ~~deceleration and turning~~ deceleration, velocity, ~~or~~ and turning radius.

6. (original) The wheelchair of claim 1, wherein the drive parameters controlled by the controller include one or more of maximum wheelchair acceleration, maximum wheelchair deceleration, maximum turning acceleration or deceleration, maximum velocity, ~~or~~ and minimum turning radius.

7. (currently amended) A wheelchair comprising:

one or more devices ~~for~~ sensing at least one of a pitch angle or a roll angle of a surface on which the wheelchair is supported;

a controller receiving input from the one or more devices, wherein the controller prevents the wheelchair from changing to a less stable configuration when the controller senses an input from at least one of the one or more ~~device~~ devices indicating that the wheelchair is on a supporting surface with sufficient incline.

8. (currently amended) The wheelchair of claim 7, wherein the controller prevents the wheelchair from changing from a configuration supporting a wheelchair occupant in a seated position to a configuration supporting ~~a~~ the wheelchair occupant in one of a reclined, tilted, lifted, or standing position when the controller senses an input from at least one of the one or more ~~device~~ devices indicating that the wheelchair is on a supporting surface with sufficient incline.

9. (currently amended) The wheelchair of claim 7, wherein the one or more devices are ~~on-board~~ absolute angle sensors.

10. (currently amended) The wheelchair of claim 7, wherein the one or more devices are ~~on-board~~ inclinometers.

11. (currently amended) A wheelchair comprising:

a frame;

one or more drive wheels supporting the frame relative to a supporting surface;

one or more drive motors for driving the one or more drive wheels;

one or more devices for sensing the angle of the supporting surface; and

a controller connected to the one or more sensing devices ~~for~~ receiving input data from the one or more sensing devices corresponding to the angle of the supporting surface, wherein the controller controls drive parameters of the one or more drive motors according to a combination of input data including the input data from the sensing devices and input data from the one or more drive motors corresponding to the velocity of the drive motors, and wherein the drive parameters controlled by the controller include one or more of wheelchair acceleration, deceleration, turning acceleration or deceleration, velocity, or turning radius to insure dynamic stability of the wheelchair.

12. (currently amended) The wheelchair of claim 11, wherein the wheelchair is ~~adapted~~ structured to be configured to various configurations and the controller prevents the wheelchair from changing to a less stable one of the configurations when the controller senses an input from at least one of the one or more devices indicating that the wheelchair is on a supporting surface with sufficient incline.

13. (currently amended) The wheelchair of claim 11, wherein the wheelchair is ~~adapted~~ structured to be configured to various configurations and the controller prevents the wheelchair from changing from a configuration supporting a wheelchair occupant in a seated position to a configuration supporting ~~a~~ the wheelchair occupant in one of a reclined, tilted, lifted, or standing position when the controller senses an input from at least one of the one or more ~~device~~ devices indicating that the wheelchair is on a supporting surface with sufficient incline.

14. (original) The wheelchair of claim 11, further comprising an articulating seat, the controller receiving input data from the articulating seat corresponding to the position of the seat and further controlling the articulating seat according to the combination of input data and the input data from the articulating seat.

15. (original) The wheelchair of claim 14, wherein the articulating seat has a recline actuator decoder and the input data from the articulating seat is sensed by the controller from a recline actuator decoder.

16. (currently amended) The wheelchair of claim 11, further comprising one or more steering motors for steering at least one of the one or more drive wheels, the controller further ~~controling~~ controlling parameters of the one or more steering motors according to the combination of input data.

17. (new) The wheelchair of claim 3, wherein one of the inclinometers is oriented to measure from a negative forward pitch angle through zero degrees to a positive forward pitch angle and another one of the inclinometers is oriented to measure from a negative roll angle through zero degrees to a positive roll angle.

18. (new) The wheelchair of claim 3, wherein the wheelchair can be operated at a first elevated dynamic performance level when the angle of the surface is below a maximum incline and a second reduced dynamic performance level when the angle of the surface exceeds the maximum incline, the controller defaulting to the second reduced dynamic performance level unless the inclinometers indicate that the angle of the surface is below the maximum incline.

19. (new) A wheelchair comprising:

one or more devices sensing an angle of a surface on which the wheelchair is supported;

a controller receiving input from the one or more devices, wherein the input corresponds to the angle of the surface on which the wheelchair is supported; and

at least one of either a control algorithm or a look up table used by the controller to control drive parameters of the wheelchair according to the input from the one or more devices so that the wheelchair can be operated at a first elevated dynamic performance level when the angle of the surface is below a maximum incline and a second reduced dynamic performance level when the angle of the surface exceeds the maximum incline.

20. (new) The wheelchair of claim 19, wherein the maximum incline is in a range of about 9 degrees and about 14 degrees.

21. (new) A wheelchair comprising:

one or more devices sensing an angle of a surface on which the wheelchair is supported;

a controller receiving input from the one or more devices, wherein the input corresponds to the angle of the surface on which the wheelchair is supported; and

at least one of either a control algorithm or a look up table used by the controller to control drive parameters of the wheelchair according to the input from the one or more devices to alter dynamic drive characteristics of the wheelchair according to the steepness and direction of the angle of the surface.